

NOVEMBER/DECEMBER 2023

FBC21/CBC21 — BIOMOLECULES

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.



1. Define anomer and epimer.
2. Outline heteropolysaccharides.
3. Spell out nonstandard amino acids.
4. Show the acidic amino acids.
5. What is denaturation?
6. Summarize the functions of globular and fiber proteins.
7. Tell Chargaff's rule.
8. Relate the structure of ATP and GTP.
9. Name the saturated fatty acids.
10. Interpret the role of lipids.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Outline the structure, occurrence and properties of lactose.

Or

- (b) Show the Structure and functions of glycogen and cellulose.

12. (a) Identify the reaction of aminoacid with FDNB.

Or

- (b) Comment on essential and non-essential amino acid

13. (a) Identify the forces involved in protein structure.

Or

- (b) Examine the protein classification based on size and shape.

14. (a) Organize the structure and functions of tRNA.

Or

- (b) Distinguish between the DNA and RNA.

15. (a) Identify and explain the classifications of fatty acids

Or

- (b) Analyze the structure and functions of Derived lipid- cholesterol.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Explain the classification of carbohydrates with examples for each type.

17. Deduce the classification of standard amino acid.

18. Elaborate the primary and secondary structure of proteins.

19. Propose the Watson and Crick model of DNA structure.

20. Elaborate on the occurrence, chemistry and biological functions of phospholipid

